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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,037	09/30/2003	Daniel Sobek	10030605-1	5396

7590 09/16/2004

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EXAMINER	
THOMPSON, JEWEL VERGIE	

ART UNIT	PAPER NUMBER
2855	

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/675,037	SOBEK ET AL.	
	Examiner	Art Unit	
	Jewel V Thompson	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16-24* is/are allowed.

6)☐ Claim(s) *1 and 6-13* is/are rejected.

7)☒ Claim(s) *2-5,14 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/30/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. Acknowledgement is made of the Information Disclosure Statement filed September 30, 2003, which has been made record of and placed in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Yin et al (6,386,050).

Regarding claims 1 and 10, Jerman et al teaches a system for monitoring flow comprising: a substrate (col. 5, lines 56-59) having integrated microfluidic features, including a microfluidic channel (col. 6, lines 14-18) having an entrance coupled to receive a flow of fluid; a heat generator (20) coupled to introduce heat tracers into the flow of fluid (col. 6, lines 30-32); a detector (28) positioned to detect temperature-dependent variations in the fluid along the microfluidic channel, the detector having an output indicative of the temperature-dependent variations (fig. 1); and a processor (18)connected to the detector to receive the output (fig. 1),the processor being configured to determine tracer propagation transit times of the heat tracers through the

microfluidic passageway and to determine bulk fluid flow rates through the microfluidic passageway, the tracer propagation transit times being based on data that includes the output of the detector, the bulk fluid flow rates being based on the tracer propagation is transit times and a pre-identified scaling between tracer propagation rates of the microfluidic passageway and the bulk fluid flow rates of the microfluidic passageway (col. 7, lines 55-63).

Regarding claim 7, Yin et al teaches the introducing the heat tracer includes selectively activating on-chip circuitry of the microfabricated device (col. 6, lines 30-32).

Regarding claim 8, Yin et al teaches the monitoring includes providing on-chip determinations of one of electrical and optical properties of the fluid, where the properties vary with variations in temperature of the fluid (col. 6, lines 2-13).

Regarding claim 9, Yin et al teaches the monitoring further includes utilizing on-chip processing circuitry in detecting changes in the properties (fig. 1).

Regarding claim 11, Yin et al teaches the heat generator and the detector are integrated onto the substrate, the heater generator and the detector being microfabricated components (fig. 1).

Regarding claim 12, Yin et al teaches the processor is coupled to a storage of information specific to the scaling between the tracer flow and bulk fluid propagation rates of the microfluidic passageway (col.7, lines 47-63).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yin et al in view of Petro (6,584,832)

Regarding claims 6 and 13, Yin et al fails to teach the information includes a calibration curve that Petro teaches calibration curves (12 A-C), which are corresponding the traces of the samples. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the calibration curve as that of Petro in the flow sensing device of Yin et al for the purpose of showing overlaid chromatographs from a set of polymer standards.

Allowable Subject Matter

4. Claims 16-24 are allowed.

Claims 2-5, 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jewel V Thompson whose telephone number is 571-272-2189. The examiner can normally be reached on 7-4:30, off alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jewel V Thompson

Jvt
September 10, 2004

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